



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/595,133

03/02/2006

Per Anders Stenberg

P18463-US1

3249

27045

7590

07/10/2008

ERICSSON INC.
6300 LEGACY DRIVE
M/S EVR 1-C-11
PLANO, TX 75024

EXAMINER

LIU, HARRY K

ART UNIT

PAPER NUMBER

3662

MAIL DATE

DELIVERY MODE

07/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,133	Applicant(s) STENBERG ET AL.	
	Examiner HARRY LIU	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Receipt is acknowledged of applicant's amendment filed (03/14/2008). Claims (19-34) are pending and an action on the merits is as follows.

Applicant's arguments have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 19-22, 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsson (6282427) in view of Hamalainen (2004/0014499).

Regarding claims 19, 22, 27, 30, Larsson discloses a device for positioning a radio transmitter (Abstract & title), comprising:

means for determining distance to a receiver of known position according to a parameter reflecting propagation delay time (column 3, lines 34-42);

means for determining direction from the receiver to the transmitter (see Fig. 4 below) by use of a plurality of location measurement units (Abstract).

Though Larsson discloses use of multiple LMU which inherently using a plurality of cells/sectors transmitted signals, Larsson does not specifically disclose using received signal level (dB) in determining the direction of transmitter. However, Hamalainen teaches determining **direction** of a received signal by **averaging** the signal

power (Abstract). It would have been obvious to modify Larsson with Hamalainen with direction determining, based on a plurality of transmitters, received signal power in order to provide a better focused signal for a smart antenna system or use of triangulation.

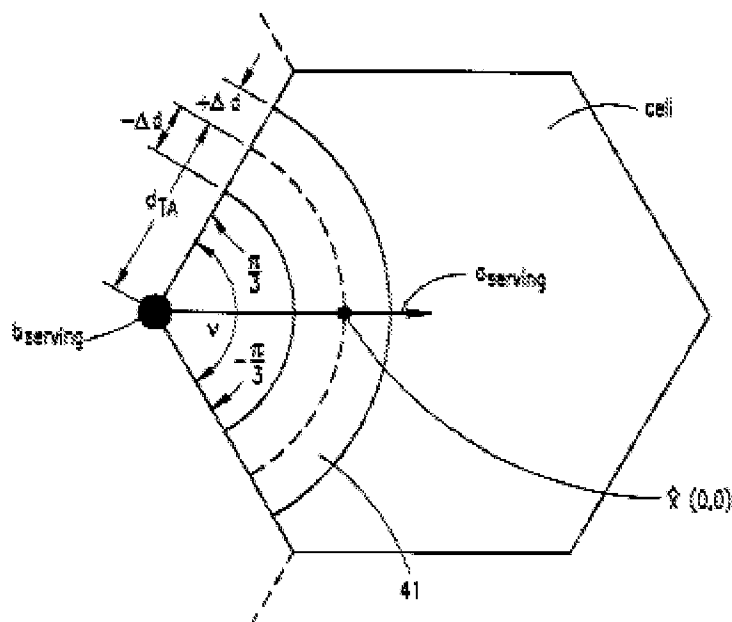


FIG. 4

Regarding claims 20, 28, Larsson discloses the distance determination is based on at least one of the immediate neighbors of the cell where the transmitter is served (see FIG. 2 below).

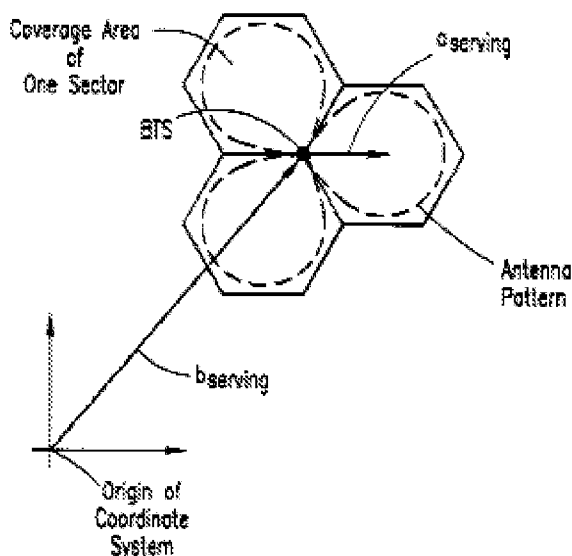


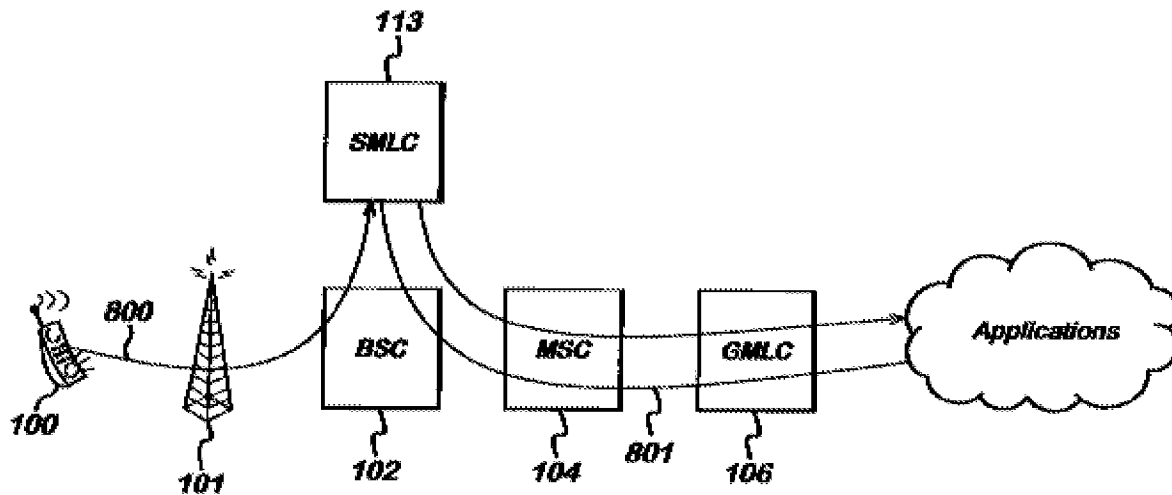
FIG. 2

Regarding claims 21, 29, Larsson discloses the position determination includes cell/sector identity (column 3, lines 34-42).

3. Claims 23-26, 31-34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsson (6282427) in view of Hamalainen (2004/0014499), and further in view of Mannoja (7069023).

Regarding claims 23-26, 31-34, Larsson as modified with Hamalainen discloses the position determination based on averaging but fails to disclose the average is formed in a network control element (claims 23,31) or standardized interface (A-bis, lub) (claims 24, 32) or BSC (claims 25, 33) or RNC (claims 26, 34). However, Mannoja teaches the use of network control element (SMLC, BSC, Fig. 8 below) and RNC (for column 3, lines 9-25) controlling/calculating the position of mobile. It would have been obvious to modify Larsson with Mannoja by incorporating SMLC, (A-bis, lub), BSC and RNC into the location service in order to satisfy GSM or UMTS system requirements.

Fig. 8



Response to Arguments

Applicant argues for claims 19 and 27 that neither Larsson nor Hamalainen teach "between at least one or more neighbor cells/sectors received level and a received level of the cell/sector where the transmitters camping or being served."

Larsson disclose use of a plurality of LMU (Abstract). LMU is known in the art installed per sector or per cell (most of the case per cell since TDOA does not work well for cosited sectors). Hamalainen discloses use of TDOA (paragraph 0052). As is well known in the art, TDOA uses three or more cells at physically distinct locations by triangulating a mobile's position. It would have been obvious Larsson, modified with Hamalainen is using multiple neighboring cells in addition to the serving cell for positioning.

It is noted that applicant does not separately argue for the feature of other claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry Liu whose telephone number is 571-270-1338. The examiner can normally be reached on Monday -Thursday and every other Friday..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 571-272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-270-2338.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Harry Liu
Examiner
Art Unit 3662
July 12, 2008

/Thomas H. Tarcza/

Supervisory Patent Examiner, Art Unit 3662